

Keystones to Opportunity: Universal Design for Learning

Participant's Packet

Pennsylvania's Vision for Sustainable Growth
in Reading Achievement



9 Content Modules

Supporting Learners with Special Needs

Using Data for Literacy Decision-Making

Reading Apprenticeship

Universal Design for Learning

Family Engagement and Family Literacy

Successful Transitions Along the Literacy Continuum

Navigating Content with English Language Learners

The Literacy Design Collaborative

Building Blocks for Literacy

Myths/Facts

- UDL is a special education initiative.
- UDL is synonymous with differentiated instruction.
- Technology is a prerequisite for implementing UDL.
- English Language Learners can benefit from UDL.
- UDL is a framework that supports teaching to the standards for all students.

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Evidence/ Interpretation Chart

| <u>Evidence</u> What I saw, read, heard.. | <u>Interpretation</u> What I thought, wondered, was confused by... |
|--|--|
| | |

Recognition Networks

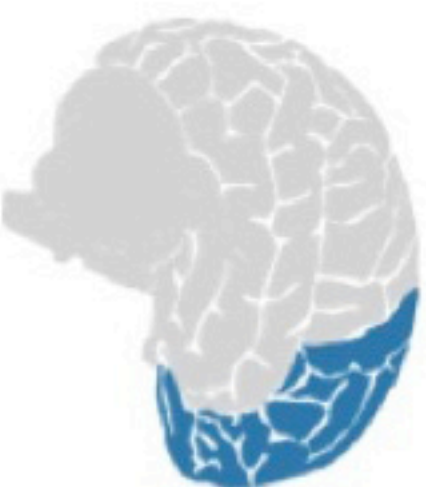
The "what" of learning



How we gather facts and categorize what we see, hear, and read. Identifying letters, words, or an author's style are recognition tasks.

Strategic Networks

The "how" of learning



Planning and performing tasks. How we organize and express our ideas. Writing an essay or solving a math problem are strategic tasks.

Affective Networks

The "why" of learning



How learners get engaged and stay motivated. How they are challenged, excited, or interested. These are affective dimensions.



Present information and content in different ways

More ways to provide Multiple Means of Representation



Differentiate the ways that students can express what they know

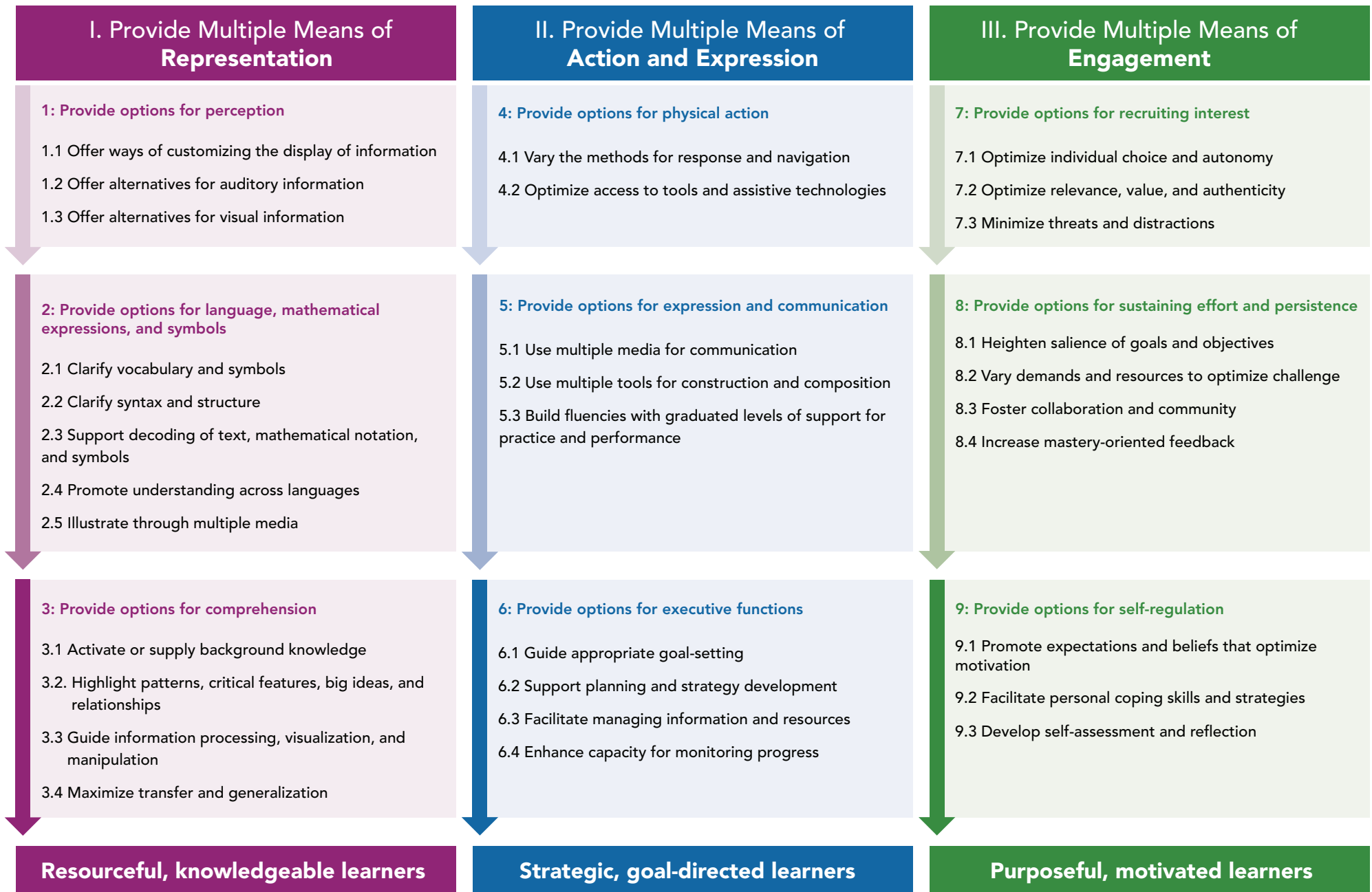
More ways to provide Multiple Means of Action and Expression



Stimulate interest and motivation for learning

More ways to provide Multiple Means of Engagement

Universal Design for Learning Guidelines



Expert Group Graphic Organizer

| Define Principle: | | | |
|--------------------------|-------------------------------|-------------------------------|-----------------------------|
| Define Guideline: | | | |
| Checkpoint Number | Key words/ Key phrases | Standout Example (2-3) | Classroom Connection |
| | | | |

Expert Group Graphic Organizer

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| | | | |
| | | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|--|------------------------|-----------------------|
| Multiple Means of Representation | | |
| 1. Provide options for perceptions | | |
| 1.1 Offer ways of customizing the display of information. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 1.2 Offer alternatives for auditory information. | | |
| | | |
| 1.3 Offer alternatives for visual information. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|--|------------------------|-----------------------|
| 2. Provide options for language, mathematical expressions and symbols. | | |
| 2.1 Clarify vocabulary and symbols. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|--|------------------------|-----------------------|
| 2.2 Clarify syntax and structure. | | |
| | | |
| 2.3 Support decoding of text, mathematical notation, and symbols. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|--|------------------------|-----------------------|
| 2.4 Promote understanding across languages. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 2.5 Illustrate through multiple media. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 3. Provide options for comprehension | | |
| 3.1 Activate or supply background knowledge. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 3.2 Highlight patterns, critical features, big ideas, and relationships. | | |
| | | |
| 3.3 Guide information processing, visualization, and manipulation. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|--|------------------------|-----------------------|
| 3.4 Maximize transfer and generalization. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| Multiple Means of Action and Expression | | |
| 4. Provide options for physical action | | |
| 4.1 Vary the methods for response and navigation. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 4.2 Optimize access to tools and assistive technologies. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 5. Provide options for expression and communication | | |
| 5.1 Use multiple media for communication. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 5.2 Use multiple tools for construction and composition. | | |
| | | |
| 5.3 Build fluencies with graduated levels of support for practice and performance. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 6. Provide options for executive functions | | |
| 6.1 Guide appropriate goal-setting. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 6.2 Support planning and strategy and development. | | |
| | | |
| 6.3 Facilitate managing information and resources. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|--|------------------------|-----------------------|
| 6.4 Enhance capacity for monitoring progress. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| Multiple Means of Engagement | | |
| 7. Provide options for recruiting interest | | |
| 7.1 Optimize individual choice and autonomy. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 7.2 Optimize relevance, value, and authenticity. | | |
| | | |
| 7.3 Minimize threats and distractions. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 8. Provide options for sustaining effort and persistence | | |
| 8.1 Heighten salience of goals and objectives. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|--|------------------------|-----------------------|
| 8.2 Vary demands and resources to optimize challenge. | | |
| | | |
| 8.3 Foster collaboration and community. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|---|------------------------|-----------------------|
| 8.4 Increase mastery-oriented feedback. | | |
| | | |
| 9. Provide options for self-regulation | | |
| 9.1 Promote expectations and beliefs that optimize motivation. | | |
| | | |

Home Group Graphic Organizer

| Key Words/Key Phrases | Standout Example (2-3) | Classroom Connections |
|--|------------------------|-----------------------|
| 9.2 Facilitate personal coping skills and strategies. | | |
| | | |
| 9.3 Develop self-assessment and reflection. | | |
| | | |

List of Resources

Tool: Voicethread

URL: www.voicethread.com

What it is: Upload files such as photos, pdfs, word documents, powerpoints and self-created images

Tool: Today's Meet

URL: <http://todaysmeet.com/>

What it is: An example of a backchannel where participants can interact with one another without disrupting the presenter. Participants use the room to comment and post questions about what they are learning.

Tool: Wall Wisher

URL: <http://wallwisher.com/>

What it is: A quick way to post online sticky notes. Participants can respond to a question or prompt by posting their comments. They can also embed images, music files, videos and documents.

Tool: Public Domain Images and Flickr

URL: <http://www.public-domain-image.com/> and <http://www.flickr.com/>

What it is: Find pictures to use in projects and presentations without worrying about copyright. Make sure to double-check the license for each picture.

Tool: Google Docs

URL: <http://www.docs.google.com>

What it is: Create documents, spreadsheets, presentations and forms online to access documents anywhere with Internet connection. Users can collaborate on the same document.

Tool: Wordsmyth

URL: <http://www.wordsmyth.net/>

What it is: Online dictionary that will define the word, provide synonyms and speak the word to you. Varying levels of difficulty for beginner's, children's and advanced.

Tool: ePals

URL: <http://www.epals.com/>

What it is: Connect and collaborate on projects with classrooms nationally and internationally.

Tool: Blogs

URL: <http://kidblog.org/> ; <http://www.blogger.com>

What it is: An online forum to posts discussions, communicate with peers and parents and showcase student work. Whichever blog you chose, it is important to start a blog where teachers can moderate comments before they are published.

Tool: Make Beliefs Comix

URL: <http://www.makebeliefscomix.com/>

What it is: An online educational comic strip creator for students to express themselves and demonstrate their content knowledge.

Tool: Library of Congress

URL: <http://www.loc.gov/teachers/>

What it is: Provides primary- source documents to use in the classroom

Tool: Noodle Tools

URL: <http://www.noodletools.com/>

What it is: Create an account to store and develop an accurate bibliography

Tool: Natural Readers

URL: <http://www.naturalreaders.com>

What it is: Free text to speech software that can convert word documents, pdfs, websites and emails into speech

Tool: Vocabahead

URL: <http://www.vocabahead.com/>

What it is: Vocabulary support that includes audio, video and provides context

Tool: Wikispaces

URL: <http://www.wikispaces.com>

What it is: An editable web page for teachers to communicate with parents and students on assignments and resources. It could be used for students to collaboratively work on projects and posts discussions.

Tool: Remind 101

URL: <https://www.remind101.com/>

What it is: Free way to text students and parents without sharing phone numbers about upcoming meetings, assignments and assessments.

Evidence/ Interpretation Chart

| <u>Evidence</u> What I saw, read, heard.. | <u>Interpretation</u> What I thought, wondered, was confused by... |
|--|--|
| | |

From Theory to Practice: UDL “Quick Tips”

Based on *Universal Design for Learning Guidelines* by the Center for Applied Technology (CAST)

| | Objectives & Benchmarks | Instructional Materials | Teaching Methods | Assessment Methods |
|---|---|--|---|---|
| | <i>To provide optimal challenges</i> | <i>To ensure equal access</i> | <i>To provide effective instruction</i> | <i>To accurately measure progress</i> |
| Representation | Describe objectives in ways that are clear and specific | Provide options in the way information is presented | Provide options for building knowledge | Use assessments that accurately measure knowledge development |
| Key Concept: Present ideas and information in multiple ways | When establishing goals and objectives, begin by making a list of the knowledge, skills, and (if applicable) attitudes you want your students to achieve. | Present information in multiple formats, including text, graphics, audio, and video. | Whenever possible, tie new concepts to prior knowledge. | Develop assessments directly from the objectives, even before designing course content. |
| The Neuroscience: "recognition networks" | Sort the list into two categories: need-to-know (essential) and nice-to-know (important, but not essential). | Make handouts and materials available well in advance of lecture and related class activities. | Provide structure to the material: highlight key concepts and explain how they relate to course objectives. | Consider alternatives to traditional quizzes and exams. |
| The Goal: Knowledge building | Differentiate between broadly-stated goals and specific learning objectives | Post lecture outlines (not necessarily complete notes) prior to class, which students can use as a framework for note taking. | Learning is more than a "spectator sport." Make it "active" and participatory. | Provide instructions for assignments both verbally and in writing. |
| | Objectives should be "SMART": Specific, Measurable, Achievable Relevant, and Timely. | Create a glossary of terms for your course and link to it from the content pages of your website. | Start each lecture with an outline of material to be covered and conclude each session with a summary of key points. | Monitor the effectiveness of instruction, e.g., "1-minute papers," quick surveys using clickers, mid-semester evaluations, etc. |
| | Consider the wide range of abilities, backgrounds, and experiences of your students when designing activities and assignments. | Develop a list of frequently asked questions for students. | Use technology to increase and enhance learning opportunities (RamCT discussion and quiz tools, clickers, SmartBoards, etc.). | Provide clear expectations and feedback. |
| | Develop a syllabus that clearly states policies, procedures, expectations, due dates, and learning objectives. | Design electronic materials to be accessible to a wide range of users and display technologies. Structure materials for easy information access. | Consider representing key concepts graphically as well as verbally. | Create a grading rubric and a set of examples of what constitutes quality work. |

| | | Create an electronic archive of course materials for student reference. | Consider adopting a "learner-centered" approach to teaching. Structure classes so that students take on multiple roles: facilitator, recorder, presenter, etc. | For writing assignments, allow for drafts and revisions; consider using peer review. |
|---|--|---|---|---|
| | | Adopt instructional technologies that help achieve learning opportunities. | Make learning relevant. Draw on real-life examples whenever possible. | |
| | | Provide digital equivalents of all hardcopy handouts. | | |
| Expression | Describe objectives in ways that are measurable and achievable | Provide options for students to express what they know | Provide options for building skills | Use assessments that measure skill development |
| Key Concept: Provide students with multiple ways to express their comprehension and mastery of a topic. The Neuroscience: "Strategic networks" The Goal: Skill building | Set goals and objectives that guide instruction and assessment. | Consider accepting alternative project formats: oral presentations, videos, newspaper articles, photo essays, radio documentaries, community research, web publications, etc. | Emphasize time on task. Create assignments that require students to practice recalling and utilizing information. Brain research confirms the adage "Practice makes perfect." | Allow students to submit assignments electronically, as appropriate. |
| | Define expectations at the beginning of the course so that support services can be arranged if needed. | Adopt instructional technologies that increase communication and allow for alternate modes of expression. | Allow students to grasp material in their preferred learning style and at their own pace. | Give prompt, ongoing, and instructive feedback to support learning and self-assessment. |
| | Communicate high expectations for all students, while expressing your willingness to make "appropriate accommodations" for students with disabilities. | Provide ample time for online assignments to allow for technical malfunction. | Help students in determine how they learn. Learning styles include visual-linguistic (reading and writing), visual-spatial (graphs and pictures), auditory (listening), or kinesthetic (touching and moving). | |
| | | Require students to find and rate web resources using criteria you've established. | Begin each class with an essential question that you will address throughout the class. Have students answer the question at the end of class. | |
| | | | Capture students' attention to pique their interest in the topic. | |
| | | | Allow students to work in pairs in labs where physical effort may disadvantage someone with a disability. | |

| Engagement | Establish objectives that motivate students to learn | Provide options in the ways students can interact with instructional materials | Provide options for building motivation and engagement | Use assessments that accurately measure emotional (attitudinal) development |
|---|---|---|---|--|
| Key Concept: Tap into students' interests, challenge them appropriately, and motivate them to learn | Become familiar with student resources on campus, including the Office of Resources for Disabled Students, the Assistive Technology Resource Center, the Academic Advancement Center, the Learning Assistance Center, and others. | Ensure that examples and content used in class are relevant to people from diverse backgrounds and experiences. | Create a welcoming class environment. Learn students' names, if possible, and use their names when calling on them. Arrive early to class and greet students as they enter. Stay a few minutes after to take questions. | When applicable, have students explore the meaning and value of their learning experiences to themselves and to society. |
| The Neuroscience: "Affective networks" | Invite students (both in writing and aloud) to speak to you if they have learning challenges. | Use online discussion groups to extend "contact time" Set standards for quality. | Encourage greater cooperation among students and contact between students and faculty. | For experiential learning activities, explore growth in the "affective domain" through reflection papers. |
| The Goal: Attitude building | Understand what is and is not an "appropriate accommodation." | Consider recording lectures and posting them as a podcasts. | Use technology to increase class communication (clickers, RamCT discussions, etc.). | Have students relate new concepts and information to their own lives and the lives of those affected. |
| | Consider the professional goals, personal interests, and values of students. Consider student diversity—age, gender, culture, language, and ability—when writing objectives. | Provide captioning or transcripts for videos. | Create some "energy" during lecture (e.g., humor, anticipation, suspense) to increase attention and recall. | Give prompt, ongoing, and instructive feedback to support learning and self-assessment. |
| | | Check for ancillary electronic materials (CD-ROM and web content) to accompany your textbook. | Illustrate abstract concepts with concrete examples. Point to real-life examples from your own experiences and those of the students. | |
| | | Make a detailed course syllabus available in the department or on the Web <i>prior</i> to the first day of class. | Invite guest speakers to share their perspectives on the topic at hand; Use technology to connect them with students via an online discussion. | |
| | | | Share your enthusiasm for the topic by citing personal experiences, research results, related news, etc. | |
| | | | Offer office hours in flexible formats: face-to-face, email, telephone, etc. | |

How do **you** teach?

Do you create a learning environment in which...

1. ideas and information are represented in multiple ways?

- ☐ Your course syllabus clearly describes the content and your expectations of the students.
- ☐ You present information in multiple formats (e.g., lecture, text, graphics, audio, video, hands-on exercises).
- ☐ You begin each lecture with an outline of what will be covered.
- ☐ You summarize key points throughout the lecture, and tie these points to the larger course objectives.
- ☐ You post electronic equivalents of paper handouts and required reading assignments in alternative formats such as audio and video.
- ☐ You employ technologies (e.g., i-Clickers, RamCT) that enhance learning.

2. students can express their comprehension in multiple ways?

- ☐ You encourage students to demonstrate knowledge and skills in ways other than traditional tests and exams (e.g., written essays, projects, portfolios, journals).
- ☐ Your assessments measure students' achievement of the learning objectives, as they are stated on the syllabus.
- ☐ You incorporate technologies that facilitate class communication and participation.
- ☐ You allow assignments to be submitted electronically.

3. students have multiple opportunities for engagement?

- ☐ You express enthusiasm for each topic you teach, and explain its real-world significance.
- ☐ You challenge students with meaningful assignments.
- ☐ You create a class climate in which student diversity is respected.
- ☐ You give prompt and instructive feedback on assignments.
- ☐ You supplement lecture and reading assignments with visual aids (e.g., photographs, videos, diagrams, interactive simulations).
- ☐ You make yourself available to students during office hours in flexible formats (e.g., face-to-face, email, online chat, telephone).

If you answered YES to most or all of these questions, congratulations! You are reaching more students through the principles of **Universal Design for Learning**.

Examples of addressing learner variability from *Learner Variability and UDL*

I. Provide Multiple Means of Representation

- Make text available in a variety of formats: e-Text reader, audio, MS PowerPoint
- Offer a variety of media to access information
- Provide multiple visual and physical examples of information using, for example, manipulatives, Smart Boards, iPads
- **Additional examples:**

II. Provide Multiple Means of Action & Expression

- Present learners with choices of tools to demonstrate knowledge. For example, provide a “technology toolkit” on a class wiki with reviews of available tools and resources
- Implement project-based learning to provide opportunities for problem solving and to help guide effective goal-setting
- Other examples: audio recording, dramatic productions, creating charts, graphs and illustrations, and free websites like Blogmeister, Glogster, Toondoo, Animoto, Xtranormal, Voki
- **Additional examples:**

III. Provide Multiple Means of Engagement

- Teach students how to use the available formats, tools and technology
- Implement project-based learning opportunities to provide options for individual choice and enhance the relevance and authenticity of the learning
- Give choices of tools, technology, medium, work environments and topic
- Guide students to understand personal learning needs so they can make good choices and become more autonomous
- Provide opportunity for independent choices of participation, for example, standing during a lesson
- **Additional examples:**

Learner Variability and UDL from the National Center on UDL (www.udlcenter.org). Copyright CAST, 2012. Used with permission. All rights reserved.

Analyzing the Lesson: Recognition Networks

Name:

Date:

Subject Area:

Lesson Title:

Learning Goal(s):

| 1. Use multiple ways to present information (Recognition Networks) | What current methods are used to address the needs of all learners? | What methods are needed for access, participation, & progress for all learners? | Materials |
|---|---|---|-----------|
| Provide multiple examples. Show the range of examples, provide examples and counter-examples. (e.g., persuasive writing – Op/Ed v. factual article in a newspaper) | | | |
| Highlight critical features (e.g., teacher tone of voice, marker underline or highlight, point to words or phrases) | | | |
| Represent information in multiple media and formats (e.g., text version of book, books on tape) | | | |
| Provide supports for limited background knowledge, and establish a context for learning (e.g., classroom resources, peer tutoring) | | | |

Analyzing the Lesson: Strategic Networks

Name:

Date:

Subject Area:

Lesson Title:

Learning Goal(s):

| 2. Provide multiple pathways for students' action, expression (Strategic Networks) | What current methods are used to address the needs of all learners? | What methods are needed for access, participation, & progress for all learners? | Materials |
|---|---|---|-----------|
| Provide flexible models of skilled performance (e.g., Math – math calc. demonstration (a) draw lines, (b) show manipulatives. Language Arts – sentence development verbally expand sentence in multiple acceptable ways. | | | |
| Provide opportunities to practice with supports (e.g., teacher prompt a multi-stepped task, provide a rubric/checkbox to edit writing) | | | |
| Provide ongoing, relevant feedback (e.g., (a) questions and answers in classroom, (b) quiz or test) | | | |
| Provide flexible opportunities for demonstrating skill. (e.g., written, oral, or visual presentation, explanations, word process) | | | |
| Provide novel problems to solve (e.g., unique problems outside the initial instructional set to promote generalization and transfer) | | | |

Analyzing the Lesson: Affective Networks

Name:

Date:

Subject Area:

Lesson Title:

Learning Goal(s):

| 3. Provide multiple ways to engage students (Affective Networks) | What current methods are used to address the needs of all learners? | What methods are needed for access, participation, & progress for all learners? | Materials |
|--|---|---|-----------|
| Offer choices of content and tools (e.g., choice of (a) books to study literature; select tragedy from a list, (b) report: written, drama, tapped presentation) | | | |
| Provide adjustable levels of challenge: (e.g., range of materials at different reading difficulties, provide response formats with prompts v. open-ended) | | | |
| Offer a choice of rewards: (e.g., provide a menu of reinforcements, treats, stickers, free time, no homework, grades) | | | |
| Offer a choice of learning context (option to work in study carrel v. open classroom, student use headphones) | | | |

